

REPORT IN DRG. HALL, SO THAT YOU BE SEATED AT YOUR SEAT 15 MINUTES BEFORE EXAMINATION i.e. AT 8.45 am.

COME PHYSICALLY FIT – TAKE MODERATE BREAKFAST & SUFFICIENT ENERGETIC LIQUID BEFORE LEAVING PLACE OF STAY.

PREPARE YOUR SELF MENTALLY FOR STANDING AND WORKING ON THE DRG. BOARD FOR CONTINUOUS 3 HRS.

DON'T BE NERVOUS, READ QUESTION PAPER CAREFULLY, UNDERSTAND THE QUESTION TO BE ATTEMPTED AND THEN MARK THE POINT OF START AND FIND ANGLE OF PROJECTION IF NEEDED.

COMPLETE FAINT WORK FULLY FIRST AND DARK IT AFTER BEING CNFIRMED.

COME WITH A SMILING FACE AND COMFIDENT MOOD & FIRM DETERMINATION.

The following are some questions In addition of 29 questions already given to you earlier.

- 30. What is screw thread and how it is formed?**
- 31. What is fastening ? Which type of fastening is welding, screw thread, riveting, keying, cottering, coupling, gearing, brazing, soldering etc?**
- 32. What is continuous helical groove and how it is formed for external & internal threads?**
- 33. What are parallel & tapered threads and explain on which type of polygon it is formed?**
- 34. What is relation between lead & pitch. Define pitch & lead?**
- 35. How helix angle is calculated and what are the data required?**
- 36. How the screw threads are specified? What do you mean by M24x3x (3e, 3g, 3h,3G and3H)?**
- 37. Show crest, root, angle of thud, flank, helix angle, fundamental triangle & its height, truncation, theoretical depth, depth of thread, pitch, RH & LH threads and slope major and root dia, pitch dia, thread profile, single, double and multiple start threads and depth of engagement.**
- 38. What is grade of class of thread and grade of fit of threaded pair?**
- 39. What is tolerance, high limit, low limit, basic size, design size, nominal size and actual size?**
- 40. What is unilateral and bilateral systems of tolerances?**
- 41. What is fine and coarse threads and where these are used?**
- 42. What is relation between pitch and lead?**
- 43. Give examples of fine threads.**
- 44. What are the factors of selecting types of fastening?**
- 45. What are thread angle for: Basic whitworth, BA, Metric, Unified, Sellers or American, Square, Acme, Knuckle and Buttress?**
- 46. Depth of thread in a pair of bolt and nut—Which depth is more in Nut or Bolt.**
- 47. What is the depth of thread of bolt and nut in Sellers profile in term of h?**
- 48. What is truncation in Unified thread profile for: a) Bolt b) Nut and how depth differs?**
- 49. What is stud and where are they used?**
- 50. What do you understand by drill, tapped, blind, counter bore and counter sunk?**
- 51. What is A/F, A/C, Radius of curvature height of nut and bolt head?**
- 52. What is the range of diameter of screw thread for which A/F, A/C and radius of curvature differ?**
- 53. What is chamfering angle?**
- 54. Do you remember the values of A/F, A/C & Radius of curvature for hexagonal and square nut and bolt?**
- 55. What are values of A/F, A/C and radius for simply drawing bolt and nut?**
- 56. Draw free hand symbolic sketch for RH & LH thread and slope.**
- 57. What do you understand for foundation bolt?**
- 58. What do you understand about locking the nut?**
- 59. What is spring washer and what is its function?**
- 60. What is welding and which type of fastening it is?**
- 61. Which type of fastening is riveted joint?**

62. Show “ easy drawing proportions “ for snap head rivet.
63. What represents “D” in rivet?
64. What are different types of rivet heads?
65. The shape of different types of rivet heads can be asked as free hand sketch.
66. Write formula for calculating the dia of rivet hole, if thickness of the plates is given.
67. Why & where rivets are preferably used over other fasteners?
68. What do you understand for semi-tubular or hollow rivets?
69. Why & where non –ferrous rivets are used? Give one example.
70. What represents a rivet 10x50 ? (dia is 10 mm and length is 50 mm)
71. Show head , shank and tail in a rivet.
72. What is Dolly- Bar?
73. What is cold riveting?
74. What are tests for rivets? (Caulking and Fullering)
75. What are seam, pitch, diagonal pitch, back pitch and margin?
76. What is lap, butt, single and multiple riveted joints?
77. Where cover plates are used. What is the thickness of cover plate if thickness of main plates is “t”?
78. What is the thickness of strap in single strap butt joint?
79. Which metal is usually used for rivets?
80. Why the ends of overlapping plates are beveled and at which angle?
81. Which type and metal is used for air craft riveting?
82. What is normal & general dimensions of a sunk key in term of ‘D’?
83. What is a cotter and how it differs with key in fitting?
84. What is Gib and when it is used in combination with cotter?
85. What is usual taper provided on the face of a sunk key?
86. Why it is necessary to provide give clearance in cotter joint?
87. What is difference between sunk key and saddle key?
88. Explain woodruff and feather key.
89. Why a head is made at one end of Gib headed key?
90. Keys and cotters are agent for transmitting power and how these are used as safety features.
91. What is key-seat and key-way?
92. What are spline shafts and spline hubs?
93. Differentiate cotter and pin joint.
94. What is pin joint called?
95. What is sleeve and cotter joint?
96. Keys and cotters are subjected to which loads?
97. What is usually taper in keys and cotters?
98. What are the types of coupling and where used?
99. What is the main difference between rigid and non-rigid couplings?
100. How couplings are fastened on shafts?
101. What are flanged couplings?
102. How compression coupling is held explain function?
103. What is claw & oldham’s coupling?
104. What is main feature of universal coupling?
105. Why bearings are used and what are main advantages of it?
106. How the load acts on Journal, Pivot and Thrust or collar bearings?
107. Is pivot bearing is called foot step bearing?
108. What is Bushed and Open bearing?
109. In which category Plummer block is? Have you heard angle plumber block?
110. What is swivel bearing? Explain functionally.
111. How bearings are supported?
112. What do you understand by wall bracket and its use?
113. Why effectively bearings save the cost?
114. What do you understand by hanger bearing, ball and roller bearings?
115. What is importance of oil hole & oil grooves in bearings?
116. Where and why stuffing box is used?

- 117. What is being stuffed between box and gland?**
- 118. Why metallic packing is used in stuffing box?**
- 119. What material is used for bushes?**
- 120. What do you understand by P & I diagram ?**
- 121. What is SLD?**
- 122. What is the use of plugs in piping layout?**
- 123. What differentiate plug with bend?**
- 124. What is screwed flange?**
- 125. What is expansion joint and where used?**
- 126. How a gland and stuffing box expansion joint works?**
- 127. What is locking of a nut and why it is necessary?**
- 128. Name ways os locking a nut which you remember?**
- 129. What is foundation bolt and where is used?**
- 130. How do you feel learning engineering drawing for you future career?**